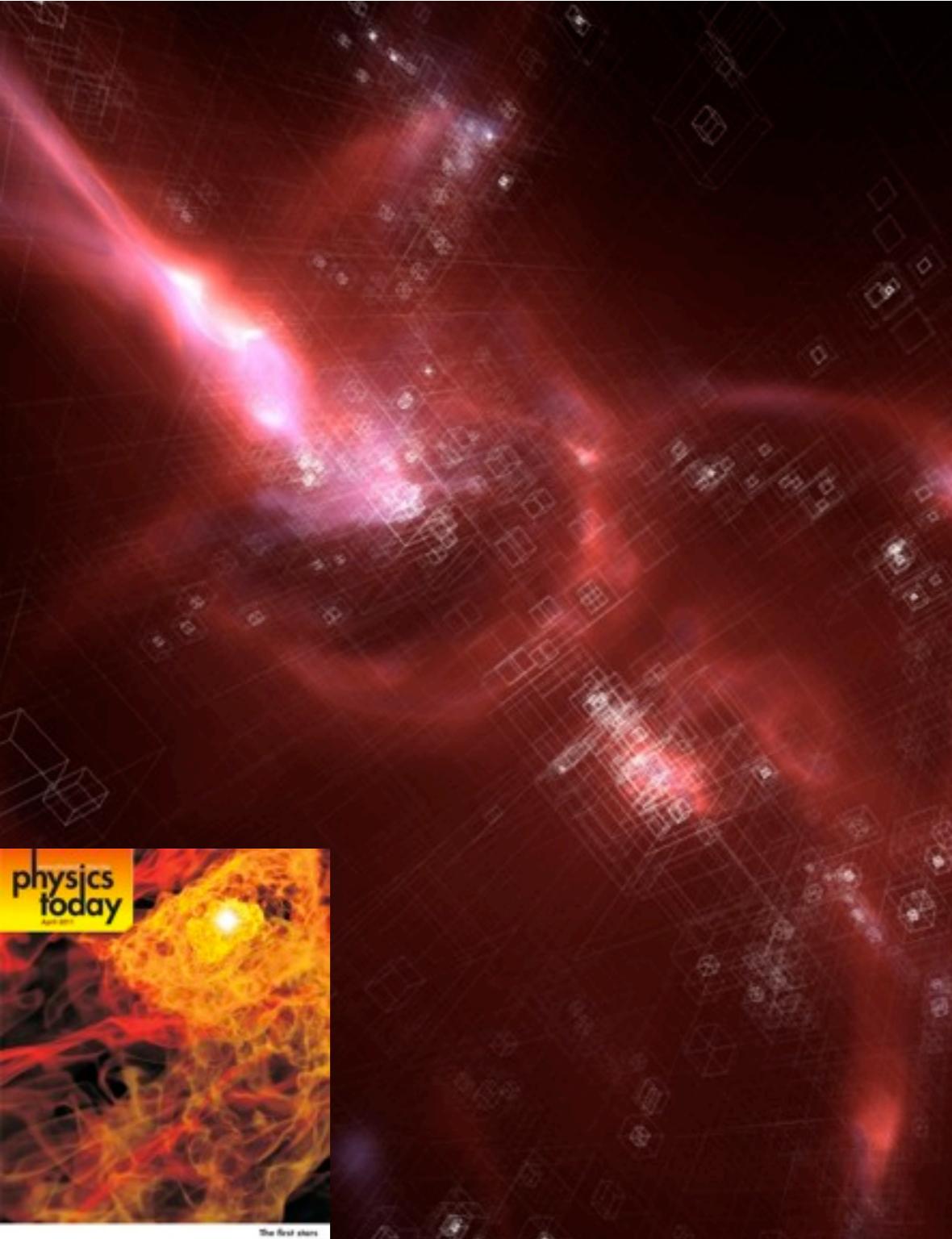


Numerical Astrophysics and Cosmology



Tom Abel

Physics Faculty at Stanford
and SLAC

DOE Computational Cosmology
Collaboration



Topics: First Stars, Galaxies, Structure Formation
High dynamic range multiscale & multiphysics
simulations

Versatile AMR Code Enzo-2.0
public code, find on code.google.com

Physics:

Gravity (Gas, Dark Matter, Cosmology)

Hydrodynamics (ZEUS/PPM/MUSCL)

Non-equilibrium chemistry, Radiation transport, MHD,
Relativistic Hydro

Shearing Box boundaries, MPI/Hybrid/CUDA MHD

Solvers: PIC, Multigrid, finite volume, adaptive ray
tracing, various stiff reaction network solvers

C++, F77, CUDA

<http://www.tomabel.org/>